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6.(amended) An isolated polynucleotide that is capable of hybridizing to any one of the sequences shown in SEQ ID Nos. [1-2, 4-5, or 7-8] 1, 3, or 5 under moderate stringency conditions.

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7.(amended) The isolated polynucleotide of claim 6, wherein the polynucleotide hybridizes to to any one of the sequences shown in SEQ ID Nos. [1-2, 4-5, or 7-8] 1, 3, or 5 under high stringency conditions.

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16.(amended) The polynucleotide of claim 15, wherein the polynucleotide encodes an amino acid sequence comprising in an N- to C-terminus orientation at least about the following amino acids of SEQ ID NO: [9] 6: 4 to 72, 87 to 190, 266 to 502, and 1132 to 1135.

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17.(amended) A polynucleotide encoding a mammalian SYNGAP as shown in any one of SEQ ID Nos : [3, 6 or 9] 2, 4, or 6; or a fragment or a derivative thereof.

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23.(amended) An isolated polypeptide having at least about 70 percent sequence identity to any one of the amino acid sequences of SEQ ID NOs:[3, 6 or 9] 2, 4, or 6.

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24.(amended) An isolated polypeptide having the sequence shown in SEQ ID NO. [3, 6 or 9] 2, 4, or 6, or a fragment or a derivative thereof.

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26.(amended) An antibody or antigen-binding fragment thereof capable of binding the amino acid sequence shown in SEQ ID NO. [9,] 6 the binding being blocked by at least about 90% by contact with the amino acid sequence shown in SEQ ID NO. [21]20, wherein the blocking is determined by an immunoprecipitation assay or a Western immunoblot.

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29.(amended) A kit comprising:
container means comprising at least one of: 1) an antibody capable of binding mammalian Synaptic GTPase Activating Protein (SYNGAP), 2) an isolated polynucleotide comprising sequence with at least about 70% sequence homology to